



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,209	07/16/2003	Michael J. Czaplicki	1001-119	1091
25215	7590	05/25/2005	EXAMINER	
DOBRUSIN & THENNISCH PC 29 W LAWRENCE ST SUITE 210 PONTIAC, MI 48342			ZIMMERMAN, JOHN J	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

W/M

Office Action Summary	Application No.	Applicant(s)
	10/621,209	CZAPLICKI ET AL.
	Examiner	Art Unit
	John J. Zimmerman	1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3,5-13 and 16-20 is/are rejected.
- 7) Claim(s) 4, 14, 18 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 July 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20031208</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

FIRST OFFICE ACTION

Information Disclosure Statement

1. The Information Disclosure Statement filed December 8, 2003 has been considered. An initialed form PTO-1449 is enclosed with this First Office Action. Citations listed a "Copending Application" have been crossed through because they are not published documents available as cited prior art to be listed on a patent that may issue from this application. Should any of these copending applications become published, applicant may wish to submit a PTO-1449 with their published information. The listings for foreign non-English language documents DE 1958903 and EP 0236291 have been crossed through because no concise explanation of the relevance of these documents (e.g. an abstract, a translation, description in applicant's specification, etc...) accompanied this particular documents. The listing for GB 2375328 has been crossed through because a copy of this document could not be found in the documents associated with this information disclosure statement.

Specification

2. The disclosure is objected to because of the following informalities: The specification should be updated to reflect the current status of the U.S. patent applications cited on page 6, lines 5-16. Appropriate correction is requested.

Claim Objections

3. Claim 18 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Dependent claim 18 merely recites the same location limitations present in independent claim 11, last two lines.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hoelzel (U.S. Patent 6,149,226).

6. Hoelzel discloses a composite structure for a motor vehicle comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural adhesive bonded to the wall and the layer of metal foam (e.g. see Figures 3 and 3a; column 4, lines 48-54).

7. Claims 1 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kim (U.S. Patent 6,183,837).

8. Kim discloses a composite structure comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural adhesive bonded to the wall and the layer of metal foam (e.g. see Figures 1-3; column 2, lines 48-59). The composite structure can be used in cars (e.g. column 6, line 30). Thickness are disclosed in column 4, lines 37-42 and column 5, lines 13-24).

9. Claims 1 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ushio (Japanese publication 03-271448).

10. Ushio discloses a composite structure for floor board construction comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural adhesive bonded to the wall and the layer of metal foam (e.g. see Figures 1-2 and abstract). Regarding the intended use "for an automotive vehicle" (e.g. claim 1, lines 1-2), a recitation of the intended use of the claimed invention must result in a structural difference

between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

11. Claims 1, 6-8 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Jarema (U.S. Patent 3,711,363) or Kotani (Japanese publication 02-240364).

12. Jarema discloses a structure comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural adhesive bonded to the wall and the layer of metal foam (e.g. see Figures 6-10; column 3, line 33 - column 4, line 41). The listed adhesives include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions. The thicknesses of the panels are given in the tables in columns 5 and 6. Kotani discloses a structure comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural adhesive bonded to the wall and the layer of metal foam (e.g. see the figure and abstract). The listed adhesive would be viscoelastic and the glass transition temperature would be inherent to the particular composition. The thicknesses of the sheet 3 is 5-7 mm, the thickness of the resin is 1.5 mm and the thickness of the overall plate relative to these layers is shown in the figure. Regarding the intended use "for an automotive vehicle" (e.g. claim 1, lines 1-2), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior

art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

13. Claims 1, 6-7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Immethun (U.S. Patent 3,846,203) or Niebylski (U.S. Patent 3,708,380).

14. Immethun discloses a structure comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural adhesive bonded to the wall and the layer of metal foam (e.g. see Figures 1-10; column 2, line 10 - column 5, line 75). The listed adhesives include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions. The thicknesses of the panels are given in Table 1 in column 8. Niebylski discloses a structure comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural adhesive bonded to the wall and the layer of metal foam (e.g. see Figure 1; column 2, line 24 - column 5, line 28). The listed adhesives include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions. The thicknesses of the panels are given in column 5, lines 29-60. Regarding the intended use "for an automotive vehicle" (e.g. claim 1, lines 1-2), a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the

claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

15. Claims 1, 5 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Schneider (U.S. Patent Application Publication 2002/0171260 A1) or Riley (U.S. Patent Application Publication 2003/0090129 A1).

16. Schneider discloses a structure for an automotive vehicle comprising a wall of a first material, a layer of metal foam opposing the wall of the first material and a layer of structural expandable foam adhesive bonded to the wall and the layer of metal foam (e.g. see Figures 1-3; paragraph [0017] for the metal foam; see paragraphs [0019] and [0013] for the expandable foam adhesive). The listed adhesives include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions. Riley (different inventive entity) discloses a structure for an automotive vehicle comprising a wall of a first material, a layer of metal foam (e.g. aluminum foam) opposing the wall of the first material and a layer of structural expandable foam adhesive bonded to the wall and the layer of metal foam (e.g. see paragraph [0026]-[0027] for the metal foam; see paragraphs [0032]-[0035] for the expandable foam adhesive). The listed adhesives include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions.

17. Claims 1, 2-3, 5 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Czaplicki (U.S. Patent 6,471,285).

18. Czaplicki (different inventive entity) discloses a structure for an automotive vehicle comprising a wall of a first material, a layer of metal foam (e.g. aluminum foam) opposing the wall of the first material and a layer of structural expandable foam adhesive discontinuously bonded to the wall and the layer of metal foam (e.g. see Figures 1-3; column 3, lines 5-9 for the metal foam; see column 7, lines 43-49 the expandable foam adhesive). The listed adhesives in the patent include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions. The discontinuous application of the foam adhesive extends to the peripheral edge of the metal foam in the figures (e.g. claim 3).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 1, 5-7, 9-13, 15-16 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (U.S. Patent Application Publication 2002/0171260 A1).

21. Schneider discloses a structure for an automotive vehicle comprising a wall of a first material, a layer of metal foam (e.g. aluminum foam) opposing the wall of the first material and a layer of structural expandable foam adhesive bonded to the wall and the layer of metal foam (e.g.

see Figures 1-3; paragraph [0017] for the metal foam; see paragraphs [0019] and [0013] for the expandable foam adhesive). The listed adhesives include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions. Schneider may differ from some of the claims (e.g. 9, 11-13, 15-16 and 18-20) in that Schneider may not require placement of the structure between a passenger compartment and an engine compartment of the automotive vehicle. Schneider, however, discloses that the structure is employable as a component in a conventional sound blocking baffle for vehicle construction (e.g. see paragraph [0035]) and one of ordinary skill in the art at the time the invention was made would understand that sound blocking baffles would be useful between the engine and passenger compartments in automotive vehicles because the engine compartment is a major source of vehicle sound. Schneider may also differ from some claims (e.g. claims 6-7, 16, 20) in that Schneider may not require that the structure have a thickness of no greater than 50 mm or 75 mm. It is noted, however, that in view of vehicle weight limitations and space limitations, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the thickness of the damping structure for minimal thickness while still retaining acceptable damping properties in order to save weight and space.

22. Claims 1-3, 5-13 and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Czaplicki (U.S. Patent 6,471,285).

23. Czaplicki (different inventive entity) discloses a structure for an automotive vehicle comprising a wall of a first material, a layer of metal foam (e.g. aluminum foam) opposing the

wall of the first material and a layer of structural expandable foam adhesive discontinuously bonded to the wall and the layer of metal foam (e.g. see Figures 1-3; column 3, lines 5-9 for the metal foam; see column 7, lines 43-49 the expandable foam adhesive). The listed adhesives in the patent include viscoelastic adhesives and the glass transition temperature would be inherent to the particular compositions. The discontinuous application of the foam adhesive extends to the peripheral edge of the metal foam in the figures (e.g. claim 3). Czaplicki may differ from some of the claims (e.g. 9, 11-13, 15-20) in that Czaplicki may not require placement of the structure between a passenger compartment and an engine compartment of the automotive vehicle. Czaplicki, however, discloses that the structure is employable as a component in a conventional sound blocking baffle for vehicle construction (e.g. see column 9, lines 6-11) and one of ordinary skill in the art at the time the invention was made would understand that sound blocking baffles would be useful between the engine and passenger compartments in automotive vehicles because the engine compartment is a major source of vehicle sound. Czaplicki may also differ from some claims (e.g. claims 6-7, 16, 20) in that Czaplicki may not require that the structure have a thickness of no greater than 50 mm or 75 mm. It is noted, however, that in view of vehicle weight limitations and space limitations, it would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the thickness of the reinforcing structure for minimal thickness while still retaining acceptable reinforcement properties in order to save weight and space.

Allowable Subject Matter

24. Claims 4 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. While the prior art of record is replete with adhesive bonded metal foams, the use of a strip of adhesive adjacent a peripheral edge wherein the adhesive substantially surrounds a significant amount of open space between the wall and the layer of metal foam (e.g. claim 4) and the use of a structural adhesive that substantially surrounds a viscoelastic adhesive in the claimed structure of claim 14, are not disclosed or made obvious by the art of record. With the exception of a few of the applied references (e.g. Czaplicki '285), the prior art embodiments typically show coextensive adhesive application. In addition, the use of a structural with a viscoelastic adhesive in the manner described in claim 14 would not have been obvious through the typical use of adhesives in the art of record.

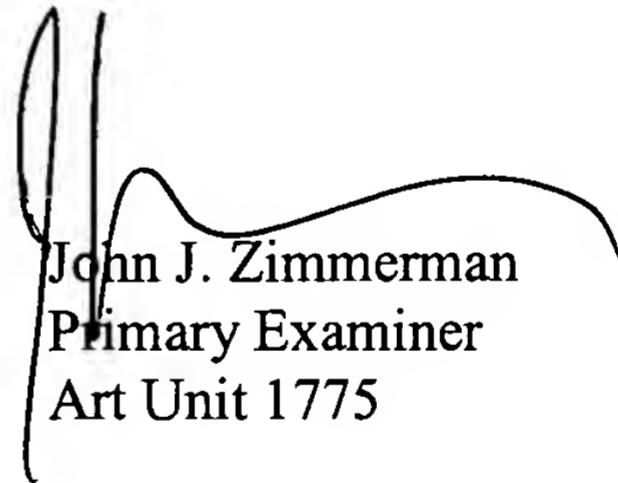
Conclusion

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited prior art serves to further establish the level of ordinary skill in the art at the time the invention was made.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Deborah Jones can

be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

27. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John J. Zimmerman
Primary Examiner
Art Unit 1775

jjz
May 13, 2005